



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,125	07/12/2006	Thomas Earle Goerke	19914-002US1	9342
26161 7590 09/11/2009 FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022				
EXAMINER KIM, WESLEY LEO				
ART UNIT 2617		PAPER NUMBER		
NOTIFICATION DATE 09/11/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary

Application No.

10/554,125

Applicant(s)

GOERKE ET AL.

Examiner

WESLEY L. KIM

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-23 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF-08)
Paper No(s)/Mail Date 10/21/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 2 recites "a list" in the limitation directed towards the establishing step.
However Claim 1 already recites "a list". Claim 2 should correct "a list" to "the list".
Appropriate correction necessary.
2. Claim 2 recites "the particular domain". This should be corrected to "a particular domain" since this is the first instance that "a particular domain" was mentioned.
Appropriate correction necessary.
3. Claim 2 recites "to those said remote stations location in said domain". This should be corrected to "to those remote stations location in said particular domain".
Terminology within the claim should be consistent. Appropriate correction necessary.
4. Claims 6-8 recite "domains in provided". This seems to be a typographical error and should be "domains are provided". Appropriate correction necessary.
5. Claim 10 recites "communications fro the central stations". This seems to be a typographical error and should be "communications for the central stations".
Appropriate correction necessary.
6. Claim 15 recites "PPP", acronyms should be spelled out and then the acronym should be placed in parenthesis before the acronym is used again throughout the claimed limitations. Appropriate correction necessary.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 5-8, 11, and 14-15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 5 recites "the published list comprises information about more than one domain" however the claim 2 clearly recites that a list is established for available network resources for a particular domain and then published to the remote stations located in the particular domain. Claim 5 is vague and indefinite since the published list in claim 2 only contains data for one domain. The examiner is confused as to how the published list in Claim 5 can contain information about more than one domain.

Claims 6-8 and 14-15 are rejected under 35 USC 112 second paragraph as being dependent upon the rejected Claim 5.

- Claim 11 recites "the static information is published less frequently than the dynamic information", however Claim 1 only publishes one list containing various information and later updates the list for transmission at a later time. Therefore, Claim 11 is confusing to the examiner since it is directed towards transmission of different lists at different times where claim 1 only teaches one list being transmitted.

Claims 12-13 are rejected under 35 USC 112 second paragraph as being dependent upon the rejected Claim 11.

- The examiner will give the broad reasonable interpretation to the claims in the Office Action in view of the 112 second paragraph rejections.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 18 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Koohgoli et al (US 5497505).

Regarding Claims 18 and 23, Koohgoli teaches a method of obtaining resources, by a remote station, in a system in which the remote station is coupled to a central station by a network (Col.5:lines 6-19, available traffic channels is the resources), and wherein the central station performs the steps of establishing a list of information about available network resources (Col.5:lines 6-19, base station (i.e. central station) sends list to subscriber terminal), and publishing the list for said remote station (Col.5:lines 6-19, sends (i.e. publishes) list to subscriber terminal (i.e. remote station)); the method comprising, in regard to the remote station, the steps of: identifying a set of said published resources needed to establish the connection (Col.5:lines 16-19 and Col.2:lines 45-49, set of needed resources identified); notifying the central station about the identified resources (Col.5:lines 16-19 and Col.2:lines 45-49); and seizing the set of identified resources to thereby establish the connection (Col.5:lines 16-19 and Col.2:lines 45-49).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 9-13, 16, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koohgoli et al (US 5497505) in view of Karabinis et al (US 2004/0192200 A1).

Regarding Claims 1, 16, 19, and 21, Koohgoli teaches a method of establishing a connection in a system in which a remote station is coupled to a central station by a network (Col.5:lines 6-19), the method comprising the steps of: establishing, by the central station, a list of information about available network resources (Col.5:lines 6-19, base station (i.e. central station) sends list to subscriber terminal); publishing, by the central station, the list for said remote station (Col.5:lines 6-19, base station (i.e. central station) sends (i.e. publishes) list to subscriber terminal); identifying, by said remote station, a set of said published resources needed to establish the connection (Col.5:lines 16-19 and Col.2:lines 45-49, set of needed resources identified); notifying, by said remote station, the central station about the identified resources (Col.5:lines 16-19 and Col.2:lines 45-49, sends identified resources to central station (i.e. base station)); seizing, by said remote station, the set of identified resources to thereby establish the connection (Col.5:lines 16-19 and Col.2:lines 45-49); however **Koohgoli does not expressly**

teach updating, by the central station, said list of available resources to thereby reflect the seizing of said set; and communicating, by the central station, the updated list to said remote station.

Karabinis teaches that it is well known in the art for a base station (i.e. central station) update a list of available resources to thereby reflect the seizing of available radio channels and sending the list to the remote station (Par.65:lines 1-12, available channels list is updated and broadcast). Therefore it would have been obvious to modify Koohgoli with Karabinis at the time of the invention to allow a mobile station to allow for dynamic allocation and selection of traffic channels which are suitable for transmission at both ends of the transmission link.

Regarding Claim 9, Karabinis teaches that the network is a satellite network (Fig.1) publishing using CDMA/TDMA (Par.67).

Regarding Claim 10, Karabinis teaches that the system comprises said plurality of remote stations (Fig.1) coupled to a plurality of central stations (Fig.1, plural base stations); and although **the combination of Koohgoli and Karabinis does not expressly teach** a said remote station may transit between operation with one said central station to any other said central station for which the remote station can receive incoming communications for the central stations. The examiner takes Official Notice that it is well known in the art that a mobile station can roam between different central stations and be handed off to receive incoming communications from another central station. This way communications reliability is maintained while roaming.

Regarding Claims 11-13, Koohgoli teaches the list of information is divided into at least one of static and dynamic information; the static information is published less frequently than the dynamic information (Fig.4a, three stacked boxes on the bottom left corner of page, clearly the list includes traffic channels (i.e. dynamic) and interference level (i.e. grade of service)).

13. Claims 2-3, 17, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koohgoli et al (US 5497505) and Karabinis et al (US 2004/0192200 A1) in further view of Elliott et al (US 6438376 B1).

Regarding Claim 2, 17, 20, and 22, Koohgoli and Karabinis teach all the limitations as recited in Claim 1, and Karabinis further teaches a plurality of remote stations (Fig.1:130w and Fig.1:130x) coupled to the central station (Fig.1:120b); and Koohgoli teaches in regard to a particular remote station, establishing a list of information about available network resources for the particular domain in which the particular remote station is located (Col.2:lines 60-64, predetermined geographical region (i.e. base station region) is a domain), however the combination of **Koohgoli and Karabinis does not expressly teach** the plurality of remote stations are located in a plurality of geographic domains; and wherein, in regard to a particular said remote station establishing a list of information about available network resources for the particular domain in which the particular remote station is located; publishing the list to those said remote stations located in said domain.

Elliott teaches that mobile stations can be located in a plurality of geographic domains (Fig.1, mobile stations can be in different sectors of a base station) and

Elliott further teaches a list of information about available network resources for the particular domain (Col.12:lines 61-63, available resources in sector) and in combination with Koohgoli's teaching of establishing a list of information about available network resources for the particular domain in which the particular remote station is located (Col.2:lines 60-64, predetermined geographical region (i.e. base station region) is a domain) it is obvious that available resources list would be established and published to the particular sector (i.e. domain) which a remote station is located. Therefore, it would have been obvious to modify Koohgoli and Karabinis with Elliott at the time of the invention to provide better signal strength coverage to mobile stations by the use of sectorized base stations and to allow dynamic allocation and selection of traffic channels which are suitable for transmission at both ends of the transmission link.

Regarding Claim 3, Koohgoli teaches wherein the information about available network resources comprises availability of channel capacity (Col.3:lines 23-26, list of available channels is the availability of channel capacity).

14. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koohgoli et al (US 5497505), Karabinis et al (US 2004/0192200 A1), and Elliott et al (US 6438376 B1) in further view of Chheda et al (US 6151512).

Regarding Claim 4, Koohgoli, Karabinis, and Elliot teach all the limitations as recited in Claim 2, however **the combination does not expressly teach** adjusting the size of a said geographic domain; and amending the corresponding list of

information about available network resources for the particular domain to reflect the adjusted domain size.

Chheda teaches that it is well known in the art that a geographical domain (i.e. base station coverage area) may be adjusted (Col.2:lines 36-45, base station coverage area is sectorized) and as a result, the available channels per sector is increased (Col.2:lines 36-45). It is obvious that Karabinis's teaching of notification of an updated list of available resources would apply to the teachings of Chheda as can be seen above. Therefore, it would have been obvious to modify Koohgoli, Karabinis, and Elliot with Chheda at the time of the invention such that a remote station may be aware of all possible resources that it may utilize in order to provide the best possible quality of service.

15. Claims 5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koohgoli et al (US 5497505) and Karabinis et al (US 2004/0192200 A1) in further view of Zicker (US 5774805).

Regarding Claim 5, Koohgoli and Karabinis teach all the limitations as recited in claim 1, however **the combination does not expressly teach** the published list comprises information about more than one domain, and wherein the identifying step comprises the steps of: determining the current geographic location of the remote station; referencing a database of geographic domains with the determined location to identify the domain to which the remote station is to be associated; and referencing the list of information with the identified domain to thereby establish which network resources are available for the particular domain.

Zicker teaches that it is a well known concept to publish a list comprising information about more than one domain (Col.8:lines 11-25 and Col.5:line 63-Col.6:line 3, cellular and cordless), and wherein the identifying step comprises the steps of: determining the current geographic location of the remote station (Col.5:line 63-Col.6:line 3, based on where the handset currently resides); referencing a database of geographic domains with the determined location to identify the domain to which the remote station is to be associated (Col.5:line 63-Col.6:line 3 and Col.8:lines 11-25, the database contains information on available channels for the different domains (i.e. cellular/cordless)); and referencing the list of information with the identified domain to thereby establish which network resources are available for the particular domain (Col.5:line 63-Col.6:line 3 and Col.8:lines 11-25). Therefore it would have been obvious to modify the combination of Koohgoli and Karabinis with Zicker at the time of the invention such that particular domains may be arranged to have a corresponding list of available channels as taught by Zicker such that all the available resources at the current location may be determined so that unused channels may be quickly identified to efficiently use the radio communication spectrum in an efficient manner with minimal delays.

Regarding Claim 7, Koohgoli teaches the database of geographic domains in provided to the remote station before it is determined to establish the connection (Col.2:lines 40-49, information about the domain is sent to the remote before establishing connection).

Regarding Claim 8, Koohgoli teaches the database of geographic domains in provided to the remote station when it is determined to establish the connection (Col.2:lines 40-49, information about the domain is sent to the remote when it is determined that connection is to be established).

16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koohgoli et al (US 5497505), Karabinis et al (US 2004/0192200 A1), and Zicker (US 5774805) in further view of Willoughby et al (US 2004/0193706 A1).

Regarding Claim 6, Koohgoli, Karabinis, and Zicker teach all the limitations as recited in Claim 5, however **the combination does not expressly teach** the database of geographic domains in provided to the remote station when the remote station is manufactured.

Willoughby teaches that it is well known in the art that a database of geographic domains (i.e.topology map) is provided to a device when it is manufactured (Par.50). Therefore it would have been obvious to modify Koohgoli, Karabinis, and Zicker with Willoughby at the time of the invention such that the mobile station may be quickly and conveniently ready to use for a customer with reduced delays due to OTA programming.

17. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koohgoli et al (US 5497505), Karabinis et al (US 2004/0192200 A1), and Zicker (US 5774805) in further view of Nelson Jr et al (US 2003/0060224 A1).

Regarding Claim 14, Koohgoli, Karabinis, and Zicker teach all the limitations as recited in Claim 5, however **the combination does not expressly teach**

determining, by the central station, if the notification collides with another notification from another remote station; and sending, by the central station, an acknowledgment to the notifying remote station, if no collision occurs; and wherein the seizing step is performed only if the acknowledgment is received by the remote station.

Nelson teaches that collision detection by the central station is well known and if the notification collides with another notification from another remote station; and sending, by the central station, an acknowledgment to the notifying remote station (Par.66, determines whether access messages collide and sends and ACK if no collision, this is a well known concept which detects collisions), if no collision occurs; and wherein the seizing step is performed only if the acknowledgment is received by the remote station (as taught by Koohgoli, where seizing is performed). Therefore, it would have been obvious to modify Koohgoli, Karabinis, and Zicker with Nelson at the time of the invention such that if any access attempt that fails due to a collision will have the possibility of re-trying access to ensure that a user may be provided with the best possible quality of service.

Allowable Subject Matter

18. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if the 112 second and objections to the claim 5, upon which it depends on is resolved in a satisfactory manner and rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WESLEY L. KIM whose telephone number is (571)272-7867. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/Wesley L Kim/
Examiner, Art Unit 2617